

## WEST Search History





DATE: Monday, May 09, 2005

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L17	L15 and (Au55)	4
<input type="checkbox"/>	L16	L15 and (Au)near2(55)	1
<input type="checkbox"/>	L15	(ligand)near2(exchang\$)	2316
<input type="checkbox"/>	L14	L13 and coulomb	20
<input type="checkbox"/>	L13	(wybourne or Hutchison) and (cluster\$ or nanocluster\$ or nanoarray\$ or array\$)	756
<input type="checkbox"/>	L12	(metal)near3(cluster\$ or nanocluster\$) and (coulomb)near2(blockdad\$)	0
	<i>DB=USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L11	(biomolecular\$ or polylys\$)near2(scaffold\$)	3
<input type="checkbox"/>	L10	nanocluster\$ and l6	10
<input type="checkbox"/>	L9	L6 near30(DNA or protein\$ or polypeptid\$ or polylys\$ or biomolecul\$)	0
<input type="checkbox"/>	L8	L7 and (DNA or protein\$ or polypeptid\$ or polylys\$)	12
<input type="checkbox"/>	L7	L6 and (array\$ or nano-array\$ or nanoarray\$)	132
<input type="checkbox"/>	L6	(coulomb)near2(blockad\$)	287
	<i>DB=USPT; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L5	L4 and (array\$ or nanoarray\$)	12
<input type="checkbox"/>	L4	(coulomb).clm. and (blockade).clm.	23
<input type="checkbox"/>	L3	(coulomb)near2(blockade)	217
	<i>DB=PGPB; PLUR=YES; OP=OR</i>		
<input type="checkbox"/>	L2	L1 and threshold	1
<input type="checkbox"/>	L1	10/816,603	1

END OF SEARCH HISTORY

10/ 816, 4 03

(FILE 'HOME' ENTERED AT 15:39:28 ON 09 MAY 2005)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:39:48 ON 09 MAY 2005

L1 132 S (WYBOURNE, M? OR WYBOURNE M?)/AU,IN  
L2 2242 S (HUTCHISON, J? OR HUTCHISON J?)/AU,IN  
L3 15 S L2 AND (COULOMB) (2A) (BLOCKAD?)  
L4 15 DUP REM L3 (0 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 15:42:03 ON 09 MAY 2005

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:46:30 ON 09 MAY 2005

L5 4879 S (AU OR GOLD) (3A) (CLUSTER? OR NANOCLUSTER?)  
L6 57 S L5 AND (LIGAND?) (4A) (EXCHANGE?)  
L7 49 DUP REM L6 (8 DUPLICATES REMOVED)  
L8 5 S L7 AND (AU55)  
L9 18624 S (POLY) (2A) (LYS?)  
L10 11 S L5 AND L9  
L11 8 DUP REM L10 (3 DUPLICATES REMOVED)  
L12 2302 S (COULOMB) (3A) (BLOCKAD?)  
L13 208 S L12 AND (AU!! OR GOLD)  
L14 89 S L13 AND (CLUSTER? OR NANOCLUSTER? OR NANOARRAY? OR ARRAY?)  
L15 7 S L14 AND (POLYLYS? OR DNA OR HELIX OR HELICAL OR PROTEIN? OR P

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L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1988:503547 CAPLUS  
 DN 109:103547  
 ED Entered STN: 17 Sep 1988  
 TI Large transition metal clusters-VI. **Ligand exchange**  
 reactions on the **gold** triphenylphosphine chloro **cluster**  
 , **Au55**(PPh3)12Cl6 - the formation of a water soluble  
**gold (Au55) cluster**  
 AU Schmid, Guenter; Klein, Norbert; Korste, Ludger; Kreibig, Uwe; Schoenauer,  
 Detlev  
 CS Inst. Anorg. Chem., Univ. Essen, Essen, D-4300/1, Fed. Rep. Ger.  
 SO Polyhedron (1988), 7(8), 605-8  
 CODEN: PLYHDE; ISSN: 0277-5387  
 DT Journal  
 LA English  
 CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 29  
 AB **Au55**(PPh3)12Cl6 is soluble in organic solvents like pyridine or CH2Cl2  
 but decomp. rapidly, thus precluding crystal growth and other studies.  
 Exchange of PPh3 in **Au55**(PPh3)12Cl6 by Ph2PC6H4SO3Na takes place  
 quant. and yields stable water-soluble **Au55**  
 (Ph2PC6H4SO3Na.2H2O)12Cl6. Mol. weight detns. and conductivity measurements  
 in H2O  
 show that the cluster is completely dissociated into 12Na+ and [**Au55**  
 (Ph2PC6H4SO3)12Cl6]12-. From such aqueous solns. very small, probably  
 crystalline  
 particles are obtained which can, in the dried state, be observed in the  
 transmission electron microscope using a 100 kV electron beam. Images are  
 given that show columns or layers of cluster mols. with a distance of 2.1  
 ± 0.1 nm. The diams. of a cluster mol. including the ligand shell and  
 of the naked cluster are calculated as 2.2 ± 0.1 and 1.3-1.4 nm, resp. The  
 cluster mols. forming the layered structures are intact. This is the 1st  
 time that M55 clusters could be imaged with an intact ligand shell by TEM.  
 Earlier microscopic studies with a 400 kV beam gave high resolution images of  
 the cluster nuclei only.  
 ST phosphinobenzenesulfonato **gold** pentapentacosa **cluster**;  
 benzenesulfonato phosphino **gold cluster**; sulfonato  
 phosphinobenzene **gold cluster**  
 IT **Cluster** compounds, coordinative  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (gold, pentapentacontanuclear, diphenylphosphinobenzenesulfon  
 ate chloro, preparation and microscopy of)  
 IT 115804-59-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and transmission electron microscopic study of)  
 IT 115945-06-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 104619-10-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with (diphenylphosphino)benzenesulfonate)  
 IT 603-35-0, Triphenylphosphine, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with fuming sulfuric acid)  
 IT 8014-95-7, Fuming sulfuric acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with triphenylphosphine)

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